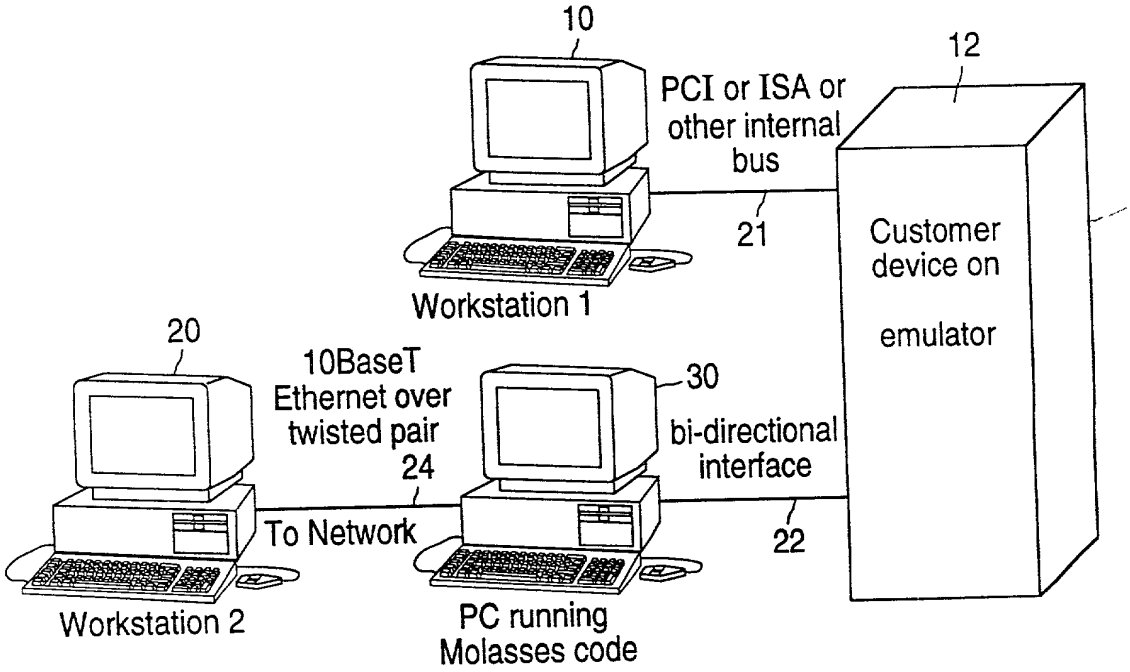
10
12
PCI or ISA or
other internal
bus
21
Customer
device on
emulator
Workstation 1
20
10BaseT
Ethernet over
twisted pair
24
30
bi-directional
interface
22
To Network
Workstation 2
PC running
Molasses code

FIG. 1

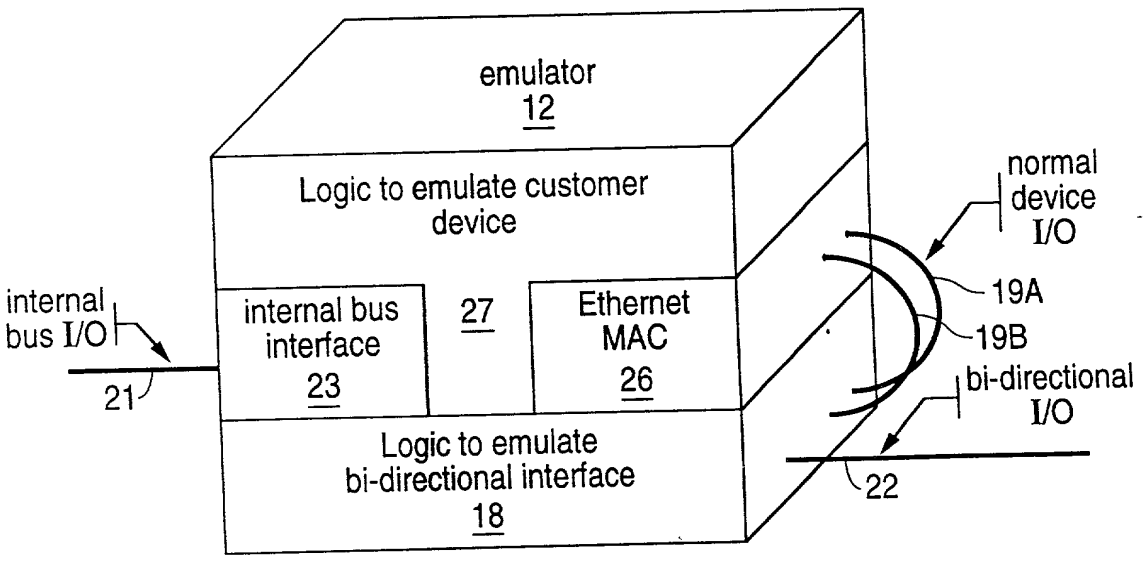
emulator
12
Logic to emulate customer
device
normal
device
I/O
internal
bus I/O
21
internal bus
interface
23
27
Ethernet
MAC
26
19A
19B
bi-directional
I/O
Logic to emulate
bi-directional interface
18
22

FIG. 2

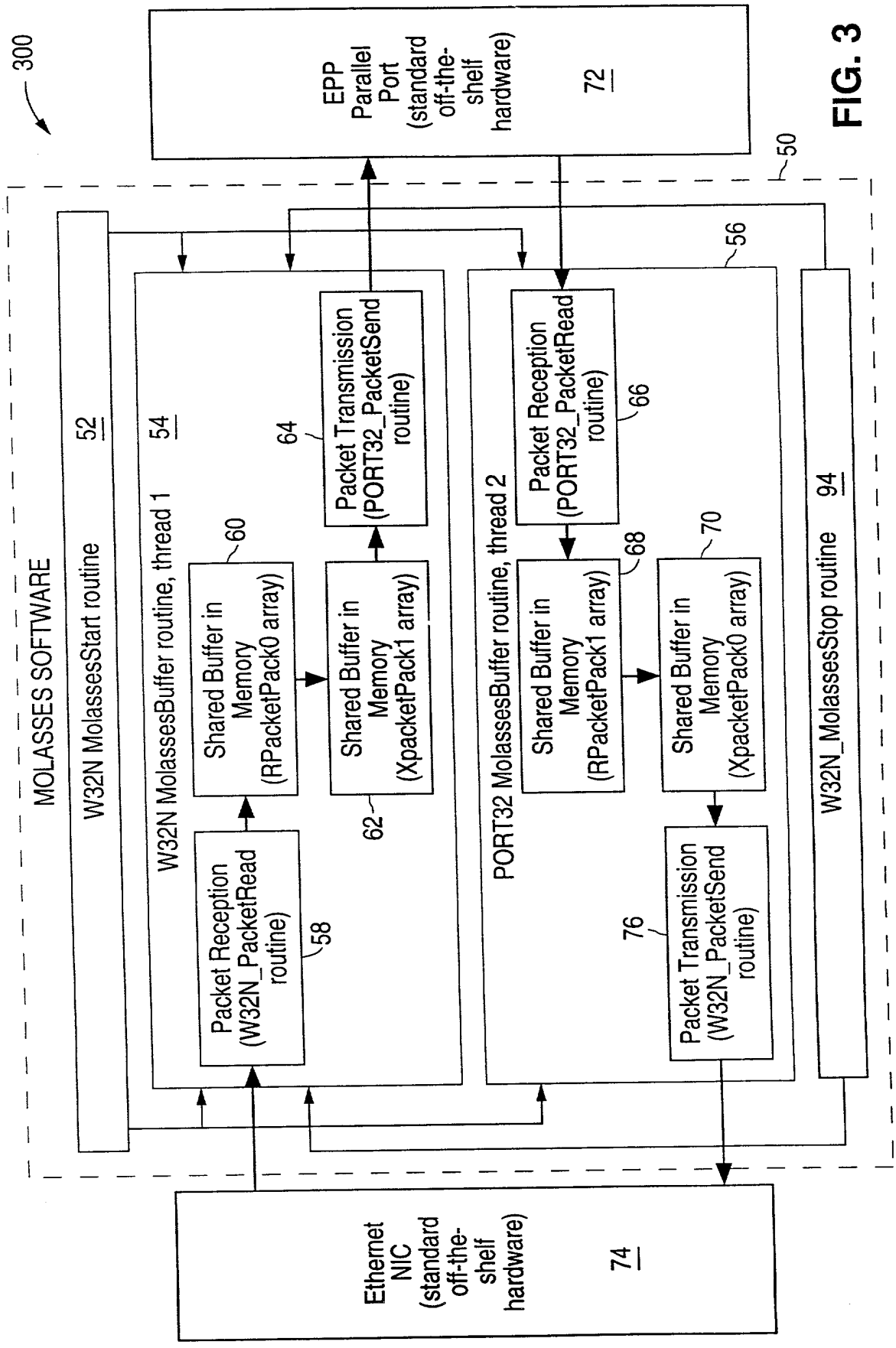
300
MOLASSES SOFTWARE
W32N MolassesStart routine
52
W32N MolassesBuffer routine, thread 1
54
Packet Reception (W32N_PacketRead routine)
58
Shared Buffer in Memory (RPacketPack0 array)
60
Shared Buffer in Memory (XpacketPack1 array)
62
Packet Transmission (PORT32_PacketSend routine)
64
PORT32 MolassesBuffer routine, thread 2
56
Packet Reception (PORT32_PacketRead routine)
66
Shared Buffer in Memory (RPacketPack1 array)
68
Shared Buffer in Memory (XpacketPack0 array)
70
Packet Transmission (W32N_PacketSend routine)
76
W32N_MolassesStop routine
94
EPP Parallel Port (standard off-the-shelf hardware)
72
50
Ethernet NIC (standard off-the-shelf hardware)
74

FIG. 3

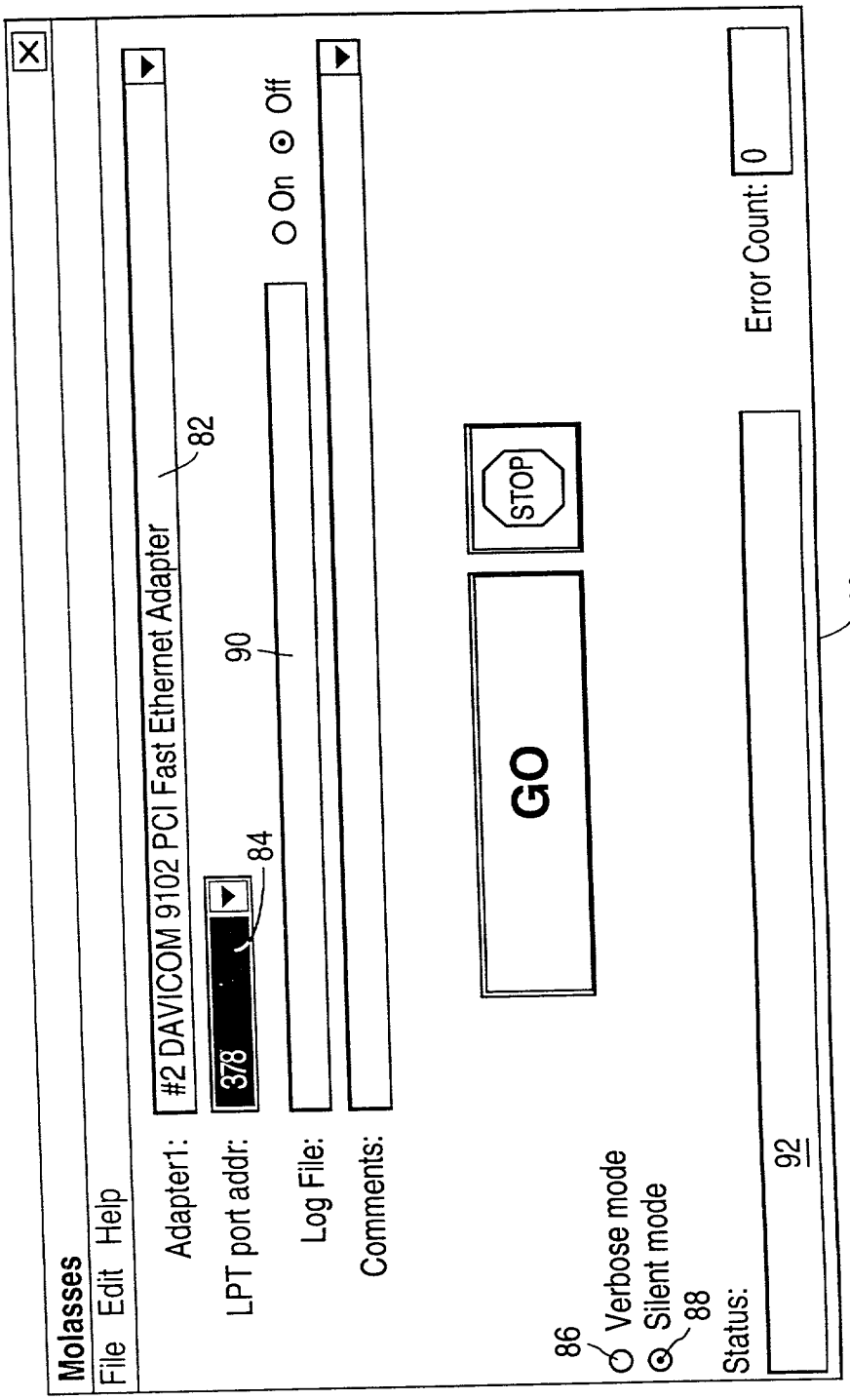
Molasses
File Edit Help
Adapter1:
#2 DAVICOM 9102 PCI Fast Ethernet Adapter
82
LPT port addr:
378
84
90
Log File:
On
Off
Comments:
GO
STOP
86
Verbose mode
Silent mode
88
Status:
92
Error Count:
0
80

FIG. 4

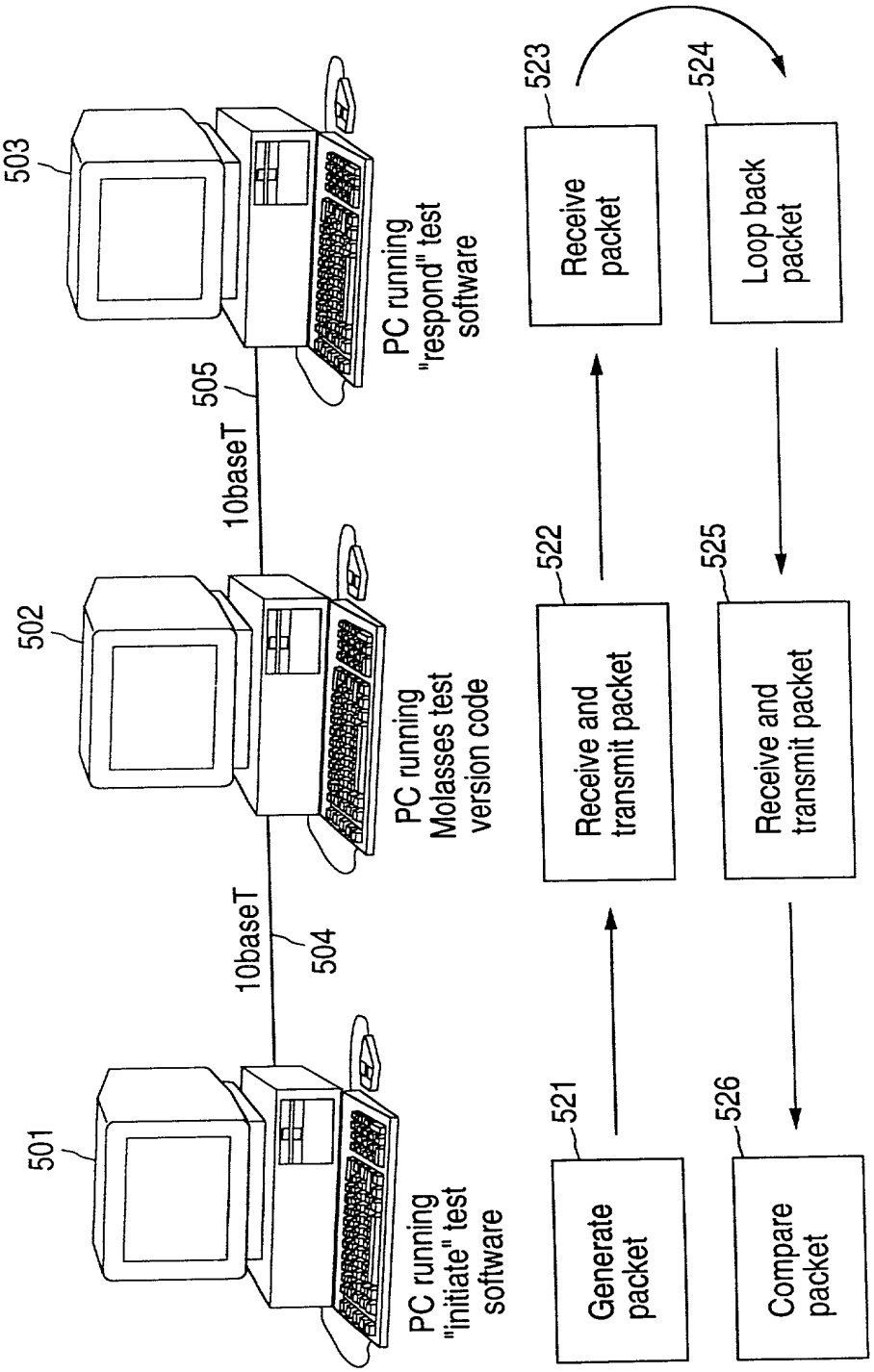
501
PC running "initiate" test software
10baseT
504
502
PC running Molasses test version code
10baseT
505
503
PC running "respond" test software
521
Generate packet
522
Receive and transmit packet
523
Receive packet
524
Loop back packet
525
Receive and transmit packet
526
Compare packet

FIG. 5

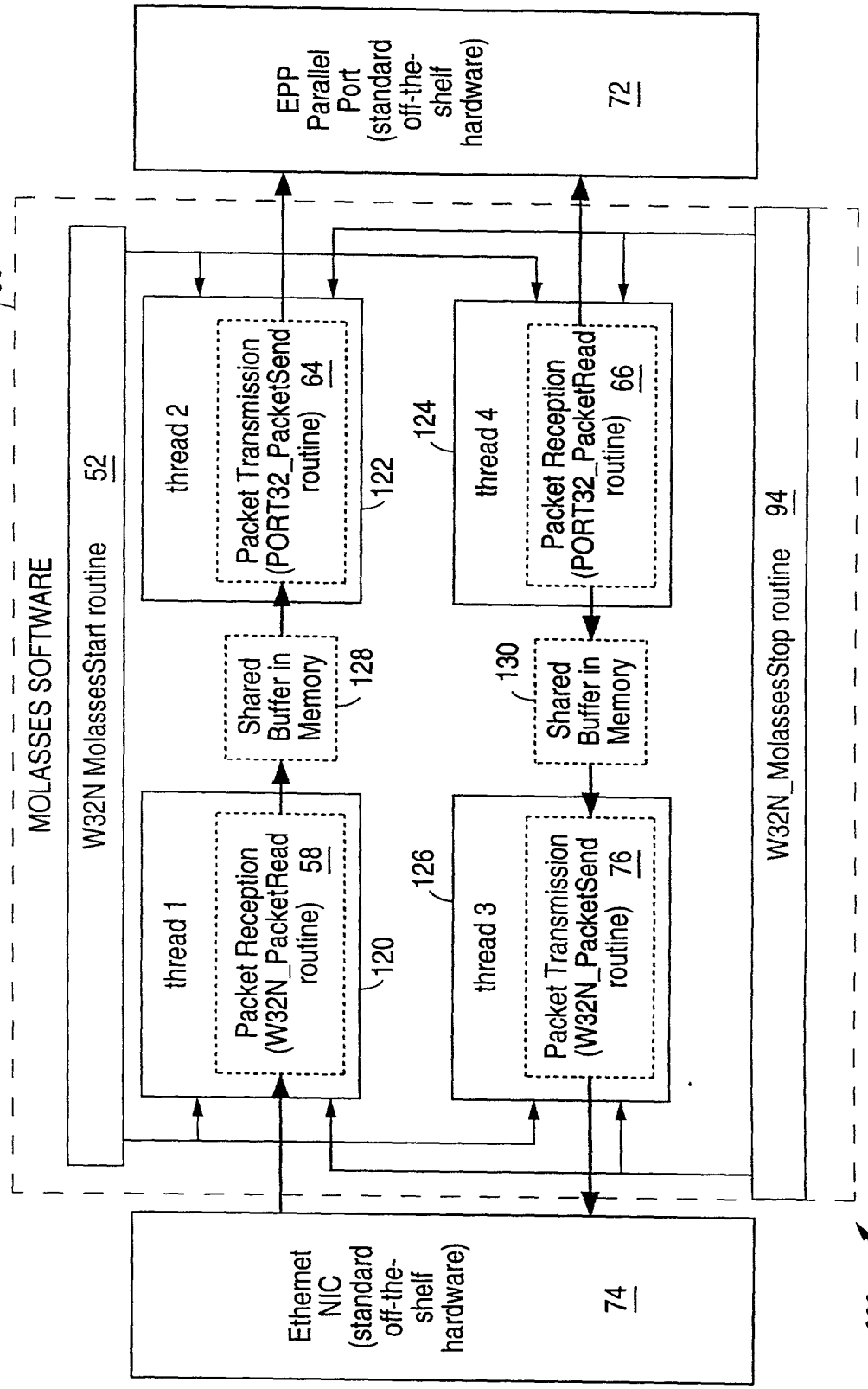
EPP Parallel Port (standard off-the-shelf hardware) 72
50
MOLASSES SOFTWARE
W32N MolassesStart routine 52
thread 2
Packet Transmission (PORT32_PacketSend routine) 64
122
124
thread 4
Packet Reception (PORT32_PacketRead routine) 66
Shared Buffer in Memory 128
130
Shared Buffer in Memory
thread 1
Packet Reception (W32N_PacketRead routine) 58
120
126
thread 3
Packet Transmission (W32N_PacketSend routine) 76
W32N_MolassesStop routine 94
Ethernet NIC (standard off-the-shelf hardware) 74
600

FIG. 6

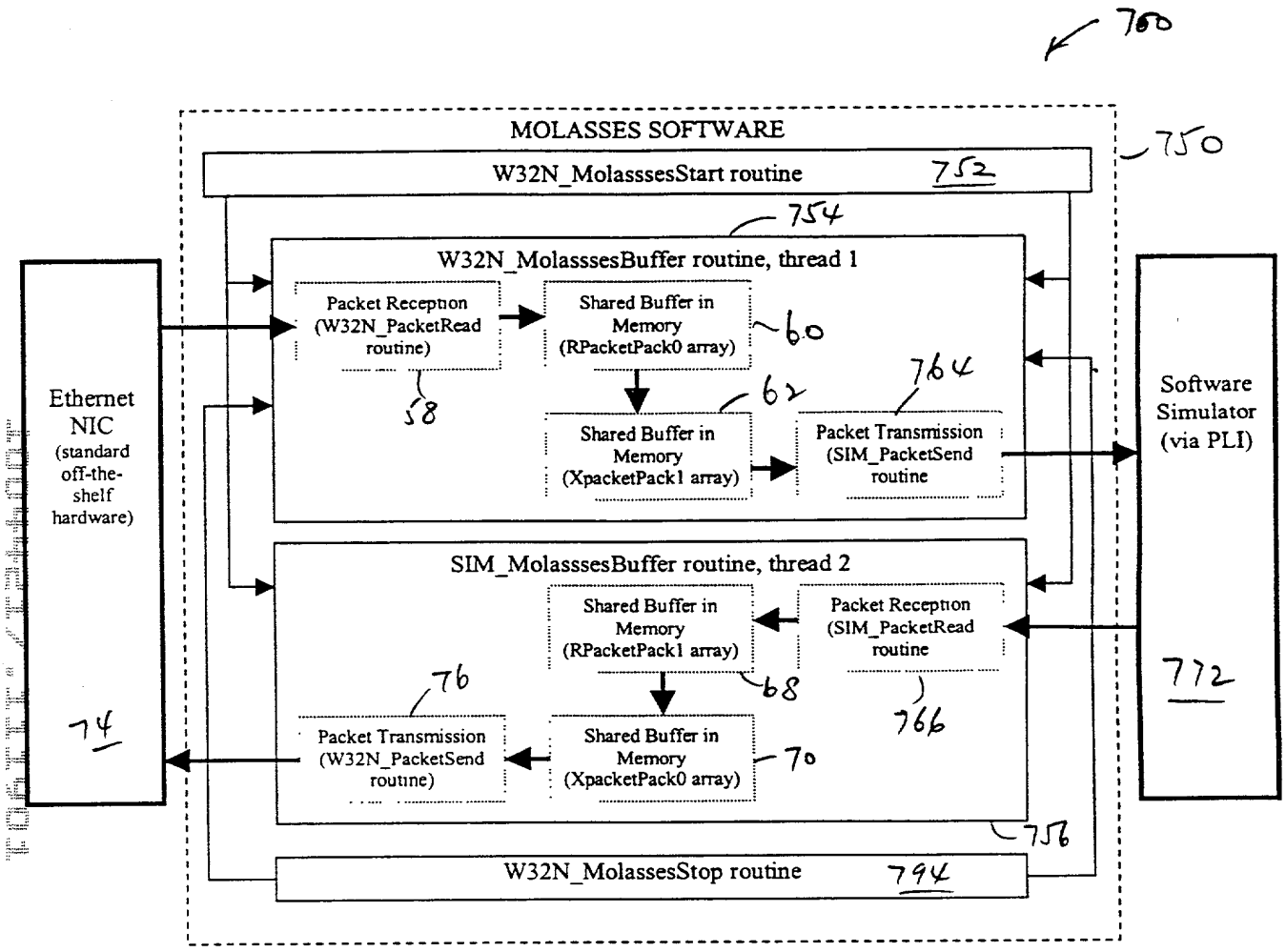
700
MOLASSES SOFTWARE
750
W32N_MolasssesStart routine
752
754
W32N_MolasssesBuffer routine, thread 1
Packet Reception (W32N_PacketRead routine)
Shared Buffer in Memory (RPacketPack0 array)
60
58
62
764
Shared Buffer in Memory (XpacketPack1 array)
Packet Transmission (SIM_PacketSend routine
Ethernet NIC (standard off-the-shelf hardware)
74
Software Simulator (via PLI)
772
SIM_MolasssesBuffer routine, thread 2
Shared Buffer in Memory (RPacketPack1 array)
Packet Reception (SIM_PacketRead routine
68
766
76
Packet Transmission (W32N_PacketSend routine)
Shared Buffer in Memory (XpacketPack0 array)
70
756
W32N_MolassesStop routine
794

FIGURE 7

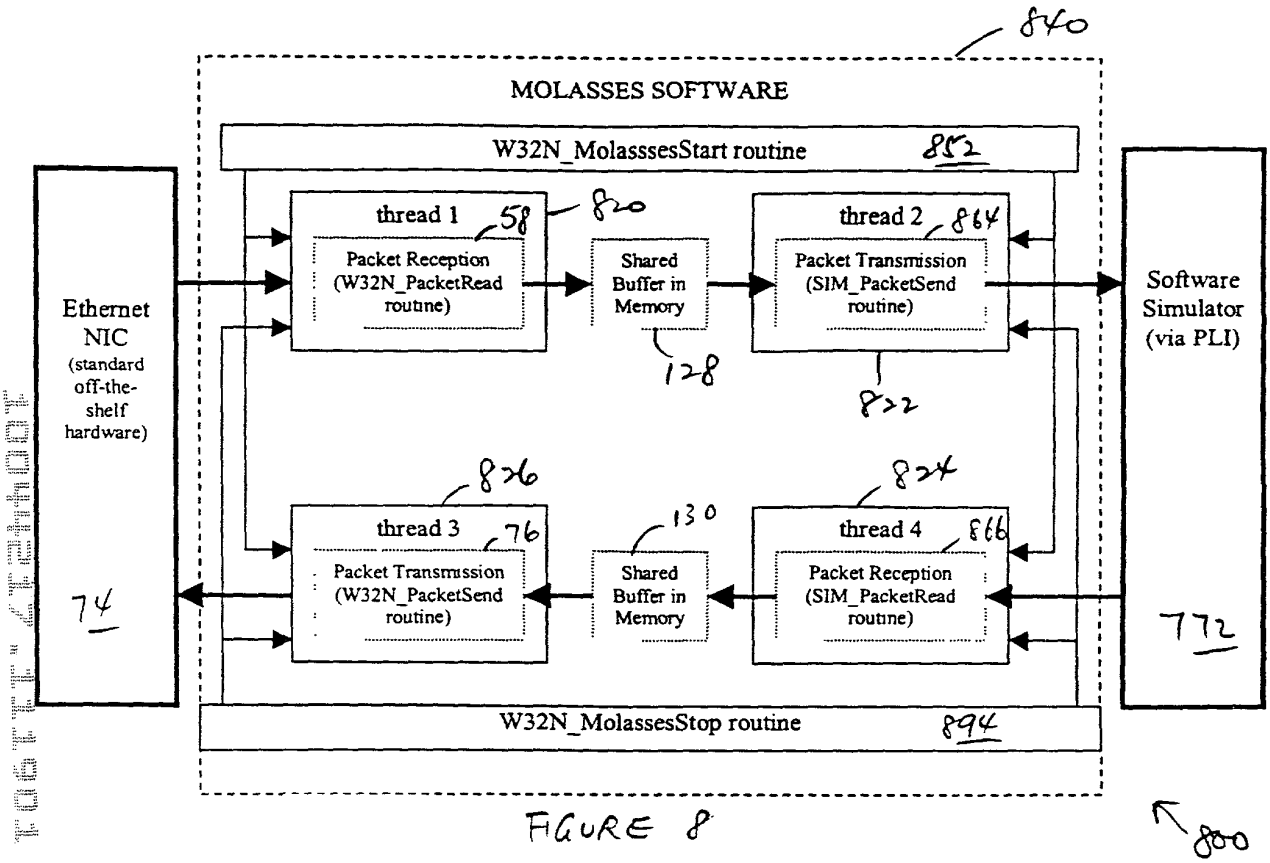
840
MOLASSES SOFTWARE
W32N_MolasssesStart routine
852
Ethernet NIC (standard off-the-shelf hardware)
74
thread 1
58
820
Packet Reception (W32N_PacketRead routine)
Shared Buffer in Memory
128
thread 2
864
Packet Transmission (SIM_PacketSend routine)
822
Software Simulator (via PLI)
772
826
thread 3
76
Packet Transmission (W32N_PacketSend routine)
130
Shared Buffer in Memory
824
thread 4
866
Packet Reception (SIM_PacketRead routine)
W32N_MolassesStop routine
894
800

FIGURE 8

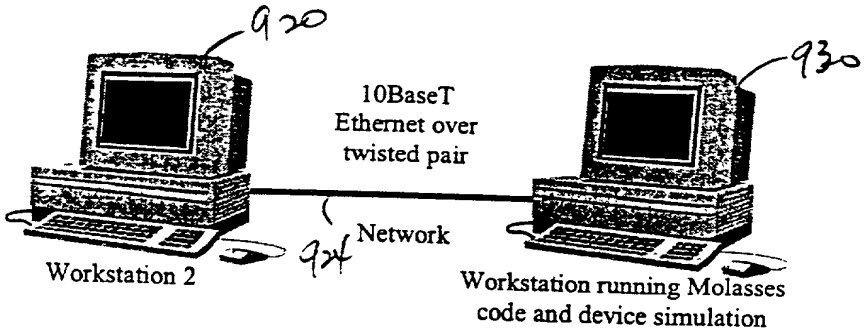

FIGURE 9

Petitioner's Exhibit 1006, p. 11 of 26